

What is claimed is:

1. A method of immobilizing biomolecules on a surface of a substrate comprising:
providing a substrate having a first surface including a functional group for non-covalent attachment to a biomolecule;
contacting at least a portion of the first surface with a reducing agent;
attaching a biomolecule to the functional group.
2. The method of claim 1, wherein the reducing agent includes a hydride.
3. The method of claim 1, wherein the reducing agent includes a borohydride.
4. The method of claim 3, wherein the borohydride includes sodium borohydride.
5. The method of claim 4, wherein the sodium borohydride is in a solution at a concentration ranging from 0.01% to 1% by volume.
6. A substrate made in accordance with the method of claim 2.
7. A substrate made in accordance with the method of claim 5.
8. A method of reducing autofluorescence on substrate containing an array of biomolecules comprising:
providing a substrate having an array of target biomolecules non-covalently attached to at least a first surface of the substrate;
treating at least a portion of the first surface of the substrate with a reducing agent;
hybridizing complementary probe biomolecules to the biomolecules; and
scanning the substrate.
9. The method of claim 8, wherein the complementary probe biomolecules are labeled with a fluorescent label.

10. The method of claim 9, wherein the step of scanning the substrate includes scanning the substrate for the fluorescent label.
11. The method of claim 10, wherein the reducing agent includes hydrogen.
12. The method of claim 11, wherein the reducing agent includes a hydride.
13. The method of claim 12, wherein the reducing agent includes a borohydride.
14. The method of claim 13, wherein the step of treating the substrate with a reducing agent includes contacting at least a portion of the first surface of the substrate with an aqueous solution containing between 0.1 and 1% sodium borohydride by volume.
15. The method of 14 wherein the aqueous solution contains between 0.2% and 0.3% sodium borohydride by volume.
16. A substrate having an array of biomolecules non-covalently attached thereto produced by the method of claim 8.
17. The substrate of claim 16, wherein the biomolecules are nucleic acids or oligonucleotides.
18. The substrate of claim 17, wherein the substrate is contains high density array of nucleic acids or oligonucleotides.
19. A method of eliminating autofluorescence from a substrate coated with a silane comprising treating at least a portion of a first surface of the slide with a reducing agent.
20. The method of claim 19, wherein the silane coating includes an amino-silane.

21. The method of claim 20, wherein the silane coating includes gamma-amino-propyl-silane
22. The method of claim 20, wherein the reducing agent includes a hydride.
23. The method of claim 22, wherein the reducing agent includes sodium borohydride.